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CADWARE SDN BHD

v.

RONIC CORPORATION

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COURT OF APPEAL, PUTRAJAYA
HISHAMUDIN MOHD YUNUS JCA
SYED AHMAD HELMY JCA
AZIAH ALI JCA
[CIVIL APPEAL NO: W-02(IPCV)(W)-931-04-2012]

C

24 JULY 2013

INTELLECTUAL PROPERTY: *Patent - Infringement - Allegation of - Whether infringement proved - Doctrine of purposive construction - Whether applied - Whether absence of essential element a material variant - Whether trial judge evaluated expert evidence appropriately*

D

The plaintiff ('respondent'), the proprietor of a Malaysian patent in respect of an invention entitled 'Device for Sensing and Alarming the Absence of Water in a Home Machine for Manufacturing Soybean Milk, Watery Bean Curd and Bean Curd' ('patent 058'), commenced a writ action against the defendant ('appellant') for the infringement of patent 058. A significant fact in the dispute was the First Switching Transistor Q9 ('Transistor Q9'), which was an essential feature in patent 058. The Judicial Commissioner ('JC'), in granting the declaration sought by the respondent, held that the circuit of the appellant's product was substantially similar to the respondent's circuit in patent 058 and the only difference in the appellant's circuit was that it did not have Transistor Q9. The JC, however, held that the variant could not be said to have a substantial effect on the way the circuit worked and thus concluded that the appellant had infringed patent 058. Hence, this appeal by the appellant.

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Held (allowing appeal with costs; setting aside order of High Court)

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Per Hishamudin Mohd Yunus JCA delivering the judgment of the court:

(1) The respondent's contention that the circuit in the appellant's product was substantially the same as the circuit in the claimed invention was unacceptable as the respondent had failed to discharge its onus of proving any infringement of patent 058. (paras 16 & 17)

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(2) The JC did not examine the respondent's claim of infringement of patent 058 in accordance with the correct principle of law; the doctrine of purposive construction. The JC merely focused on the way in which the entire circuitry functioned rather than focusing her mind on the variant, namely the Transistor Q9. The JC merely made a simplistic finding that the entire circuitry in the appellant's product worked in the same way as the circuitry in patent 058 and thereafter to immediately conclude erroneously that the absence of Transistor Q9 has had no effect on the way the respondent's invention worked. The absence of Transistor Q9, which was considered to be essential, should have led the JC to dismiss the infringement claim. (paras 19-21 & 24)

(3) The JC had failed to consider, *inter alia*, the analysis in an expert report which anticipated that the absence of Transistor Q9 would cause the invention to work in the reverse order and the comments that the effects of the absence of Transistor Q9 must have been overcome by other elements, such as a 'reverse-logic code' in the controller, resulting in the erroneous finding. The JC had also failed to evaluate the expert evidence which had impliedly conceded that the presence or absence of Transistor Q9 was a material variant for the purpose of the respondent's invention. (paras 25-27)

Bahasa Malaysia *Translation Of Headnotes*

Plaintif ('responden'), pemilik paten Malaysia berkaitan dengan suatu rekaan bertajuk 'Device for Sensing and Alarming the Absence of Water in a Home Machine for Manufacturing Soybean Milk, Watery Bean Curd and Bean Curd' ('paten 058'), memulakan tindakan writ terhadap defendan ('perayu') bagi pelanggaran paten 058. Fakta penting dalam pertikaian tersebut adalah First Switching Transistor Q9 ('Transistor Q9'), suatu ciri penting dalam paten 058. Pesuruhjaya Kehakiman ('PK'), dalam membenarkan deklarasi yang dipohon oleh responden, memutuskan bahawa litar dalam keluaran perayu adalah hampir sama dengan litar responden dalam paten 058 dan satu-satunya perbezaan dalam litar perayu adalah bahawa ia tidak mempunyai Transistor Q9. PK walau bagaimanapun memutuskan bahawa kelainan tersebut tidak boleh dikatakan mempunyai kesan yang besar kepada cara litar tersebut berfungsi dan dengan itu memutuskan bahawa perayu telah melanggar paten 058. Maka, rayuan ini oleh perayu.

Diputuskan (membenarkan rayuan dengan kos; mengenepikan perintah Mahkamah Tinggi)
Oleh Hishamudin Mohd Yunus HMR menyampaikan penghakiman mahkamah:

(1) Hujahan responden bahawa litar dalam keluaran perayu adalah hampir sama dengan litar dalam rekaan yang dituntut tidak boleh diterima kerana responden telah gagal melepaskan beban pembuktian apa-apa pelanggaran paten 058.

(2) PK tidak memeriksa tuntutan pelanggaran paten 058 responden menurut prinsip undang-undang yang betul; doktrin pentafsiran bertujuan. PK semata-mata memfokuskan kepada cara bagaimana keseluruhan litar berfungsi dan bukan meneliti kelainan yang wujud, iaitu Transistor Q9. PK hanya membuat dapatan mudah bahawa keseluruhan pelitaran dalam keluaran perayu berfungsi dalam cara yang serupa dengan pelitaran dalam paten 058 dan kemudiannya dengan segera memutuskan secara khilaf bahawa ketiadaan Transistor Q9 tidak mempunyai kesan kepada cara rekaan responden berfungsi. Ketiadaan Transistor Q9, yang dianggap penting, sepatutnya menjurus kepada PK menolak tuntutan pelanggaran tersebut.

(3) PK telah gagal mempertimbangkan, antara lain, analisa dalam laporan pakar yang menjangka ketiadaan Transistor Q9 akan mengakibatkan rekaan tersebut berfungsi dalam kaedah balikan dan komen-komen bahawa kesan ketiadaan Transistor Q9 perlu diatasi dengan elemen-elemen lain, seperti 'reverse-logic code' dalam pengawal, yang menjurus kepada dapatan yang salah. PK juga telah gagal menilai keterangan pakar yang secara tersirat mengakui bahawa kewujudan atau ketiadaan Transistor Q9 adalah kelainan yang penting bagi tujuan rekaan responden.

Case(s) referred to:
Catnic Components Ltd & Anor v. Hill & Smith Ltd [1982] RPC 183 ***(refd)***
Improver v. Remington [1990] FSR 181 ***(refd)***
Marconi v. British Radio Telegraph and Telephone [1911] 28 RPC 181 ***(dist)***

For the appellant - Khoo Guan Huat (Kuek Pei Yee & Moo Ker Wei with him); M/s Skrine
For the respondent - Michael Soo (Ng Kim Poh, Wendy Lee & Lee Wei Na with him); M/s Shook Lin & Bok

Reported by S Barathi

JUDGMENT

Hishamudin Mohd Yunus JCA:

Introduction

[1] This appeal is against the decision of the High Court of Kuala Lumpur.

[2] On 22 March 2012, the learned Judicial Commissioner of the High Court of Kuala Lumpur, after a full trial, granted a declaration that the appellant (the defendant at the High Court) had infringed the respondent's (the plaintiff at the High Court) patent. She made the consequential orders prayed for by the respondent, including an injunction order, a discovery order, and an order for the assessment of damages.

[3] The writ action against the defendant is for the infringement of the respondent's patent, Patent 058. The crux of the respondent's complaint is that the circuit in the appellant's product infringed Patent 058.

[4] The appellant denies any infringement of the respondent's patent.

Facts Of The Case

[5] The respondent is a proprietor of a Malaysian patent, namely, Malaysian Patent No. MY-134058-A in respect of an invention entitled 'Device for sensing and alarming the absence of water in a home machine for manufacturing soybean milk, watery bean curd and bean curd' ('Patent 058').

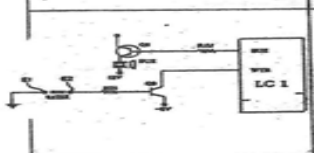
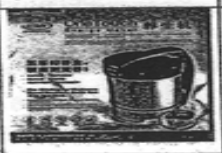
[6] The features of the patent claim are explained by the respondent's expert witness (PW2) by way of a table (Table A) in his answer to Q15 of his written witness statement. In his evidence, he specified certain features of the circuit of the appellant's product and compared them with a list of elements that are the essential features of Patent 058. We shall reproduce Table A below:

Q15: Why do you say that the Defendant's soy milk machine infringes Patent 058?

A: The following table sets out the elements infringed by the Defendant's soy milk machine:-

TABLE A

Water Detector Claim Analysis

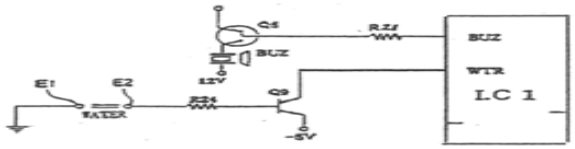
	Elements of Patent 058	Elements of Infringing Product	Remarks / Observation
Drawing			
Claim 1	Ground Electrode (E1)	Metal surface of Motor & Pot	Yes
	Signal Electrode (E2)	Round bar	Yes
	First Resistor (R24)	Resistor (R33)	Yes
	First Switching Transistor (Q9)	-	No
	Controller (IC1)	Controller	Yes
	Second Resistor (R21)	Second Resistor (R20)	Yes
	Second Switching Transistor (Q5)	Switching Transistor (Q4)	Yes
	Buzzer	Buzzer	Yes

A significant fact in this dispute is that the First Switching Transistor, Q9 ('Transistor Q9'), as referred to in Table A above, is an essential feature in the claimed invention in Patent 058.

This feature, Transistor Q9, is not present in the circuitry of the appellant's product.

Patent 058 claims a circuitry to detect the absence of water, and to trigger an alarm in the absence of water.

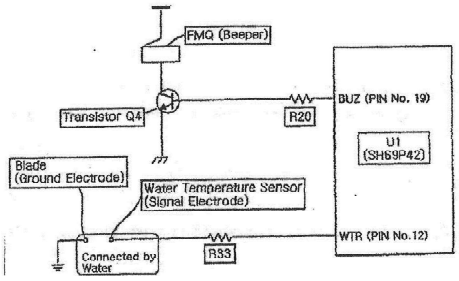
The invention (i.e. circuit) claimed in Claim 1 of Patent 058 is reproduced as follows:



[7] The circuit disclosed in Patent 058 is connected by the presence of water, wherein the ground electrode E1 and the signal electrode E2 will be electrically connected to each other by means of the presence of water. When water is absent between the ground electrode E1 and signal electrode E2, the First Switching Transistor Q9 will be turned off and the buzzer will trigger an alarm.

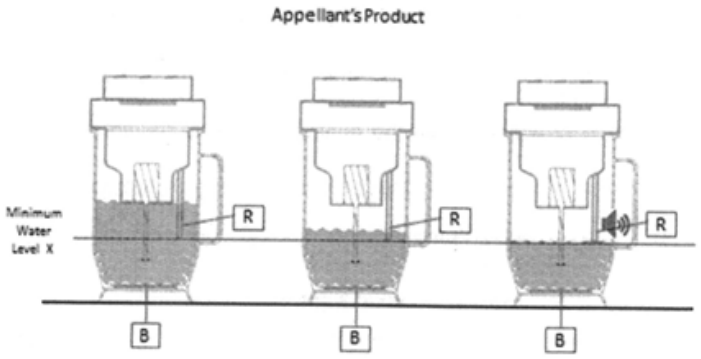
[8] The appellant's product, also a soya milk machine, is called 'One Touch Energy Maker Model No. CW-103A'. In the appellant's product, the alarm is set off when the water goes below a certain level. In other words, the alarm will still go off in the appellant's product even when water is present.

[9] The diagram of the circuit for the detection of the level of water in the appellant's product is reproduced herewith:



[pp. 1075-1077 at p. 1076, A/R, Jilid 2(6), C]

A pictorial illustration of the operation of the defendant's/ appellant's product is set out below for ease of reference.



[10] In the appellant's product there is a circuitry to detect water levels, and this circuitry would act to prevent heat from being supplied to the water contained within the machinery when the water level drops below the rod that functions as an electrode. The product is designed in such a way that the amount of water within the machinery must be above a certain level before the machine could operate. If, at any time, the water level falls below the designated minimum level, the machine will cease to function.

[11] In the diagram above, the minimum water level is marked as 'X'. The circuitry of the appellant's product detects the water levels using the rod 'R' as the sensor. If the water level were to fall below the lower end of rod 'R', the machine would not function. This is because the presence of water above the minimum level is required to complete the circuit by connecting the two electrodes, which are rod 'R' and the inner metal surface at the base of the vessel 'B'.

[12] It can be seen from the diagram above that there is a gap or distance between the lower end of rod 'R' and base of the vessel 'B'. What this means is that when the appellant's product is in operation:

(a) there will always be some amount of water in the appellant's product; and

(b) the alarm would be sounded (or the power would be cut off) once the water level drops below the lower end of rod 'R'; and

(c) there would still be water in the vessel even when the alarm has sounded (or the power has cut-off).

[13] It is evident that the circuitry of the appellant's product does not work on the principle of detection of absence of water, but rather detection of water levels; and the 'alarm' would have been triggered while there is still water in the vessel.

The Grounds Of Judgment Of The High Court

[14] In her grounds of judgment, the learned Judicial Commissioner ruled:

> 84. A comparison of the Plaintiff's and the Defendant's circuit diagrams reveal that the circuit of the Defendant's One Touch Energy Maker is substantially similar to Plaintiff's circuit in Patent

058 with all the elements, (except one), of Patent 058, namely, transistors, resistors, buzzers, controller and free standing electrodes which will be connected in the presence of water, are being reproduced in the circuit of the One Touch Energy Maker.

85. The only difference in the Defendant's circuit is that it uses only 1 transistor as opposed to the Plaintiff's circuit which uses 2 transistors. In other words, the Defendant's circuit does not have transistor Q9.

86. However, this variant cannot be said to have a substantial effect on the way the circuit works. This is clear from PW3's analysis and experiments carried out on the Plaintiff's circuit and the Defendant's circuit where he was able to conclude that the circuit, with or without transistor, would function in the same way.

87. Based on the above, the One Touch Energy Maker reproduces all the main elements of Patent 058 except for one transistor, which is transistor Q9. Thus I am of the view the circuit in the One Touch Energy Maker functions in the same way as that in Patent 058.

...

90. In my judgment on the balance of probabilities it can be safely concluded that the One Touch Energy Maker, having used a circuit which is identical to and functions in the same way as the circuit in Patent 058, has infringed Patent 058.

The Decision Of This Court

[15] On 15 October 2012 we unanimously allowed the appeal with costs. We set aside the Order of the High Court.

[16] In our judgment, the respondent had failed to discharge its *onus* of proving any infringement of the Patent 058.

[17] In our judgment, we are unable to accept the respondent's contention that the circuit in the appellant's product is substantially the same as the circuit in the claimed invention.

[18] We now elaborate on our grounds.

A **Our Grounds**

[19] In our judgment, the learned Judicial Commissioner, with respect, did not examine the respondent's claim of infringement of Patent 058 in accordance with the correct principle of law: the
B doctrine of purposive construction. This is evident from paras. 87 and 90 of the grounds of judgment, where the learned Judicial Commissioner held that:

> 87. Based on the above, the One Touch Energy Maker reproduces all the main elements of Patent 058 except for one
C transistor, which is transistor Q9. Thus I am of the view the circuit in the One Touch Energy Maker functions in the same way as that in Patent 058.
>
> ...
>
D 90. In my judgment on the balance of probabilities it can be safely concluded that the One Touch Energy Maker, having used a circuit which is identical to and functions in the same way as the circuit claimed in Patent 058, has infringed Patent 058.

E **[20]** The learned Judicial Commissioner made a finding of infringement against the appellant, despite noting the absence of Transistor Q9 in the circuitry of the appellant's product. The learned Judicial Commissioner justifies her finding on the basis that the circuitry in the appellant's product, despite the absence of
F Transistor Q9, functions in the same way as the claimed invention in Patent 058.

[21] In our judgment, by setting out Transistor Q9 in Table A, the respondent's witness, Cha Ju Seob (PW2 - the Executive Director of Ronic Corporation), had considered this feature to be
G essential. The absence of Transistor Q9 in the appellant's product should have led the learned Judicial Commissioner to dismiss the infringement claim.

The Doctrine Of Purposive Construction, And The Improver
H **Questions**

[22] We hold that in determining patent infringement, it is the doctrine of purposive construction that ought to be applicable. In the landmark case of *Catnic Components Ltd & Anor v. Hill &*

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Smith Ltd [1982] RPC 183, the House of Lords discarded the pith and marrow test and formulated a new doctrine: the doctrine of purposive construction. In this case, Lord Diplock said (at pp. 242-243):

> A patent specification should be given a purposive construction rather than a purely literal one derived from applying to it the kind of meticulous verbal analysis in which lawyers are too often tempted by their training to indulge. The question in each case is: whether persons with practical knowledge and experience of the kind of work in which the invention was intended to be used, would understand that strict compliance with a particular descriptive word or phrase appearing in a claim was intended by the patentee to be an essential requirement of the invention so that any variant would fall outside the monopoly claimed, even though it could have no material effect upon the way the invention worked.
>
> The question, of course, does not arise where the variant would in fact have a material effect upon the way the invention worked. Nor does it arise unless at the date of publication of the specification it would be obvious to the informed reader that this was so. Where it is not so obvious, in the light of then-existing knowledge, the reader is entitled to assume that the patentee thought at the time of the specification that he had good reason for limiting his monopoly so strictly and had intended to do so, even though subsequent work by him or others in the field of the invention might show the limitation to have been unnecessary. It is to be answered in the negative only when it would be apparent to any reader skilled in the art that a particular descriptive word or phrase used in a claim cannot have been intended by a patentee, who was also skilled in the art, to exclude minor variants which, to the knowledge of both him and the readers to whom the patent was addressed, could have no material effect upon the way in which the invention worked.

[23] We shall refer to the above question as the '*Catnic* question'. In *Improver v. Remington* [1990] FSR 181, Hoffmann J reformulated the one Catnic question into the following three-stage test known as the '*Improver* questions'. The *Improver* questions are as follows (at pp. 188-189):

> The proper approach to the interpretation of patents registered under the Patents Act 1949 was explained by Lord Diplock in *Catnic Components Ltd v. Hill & Smith Ltd.* The language should

A be given a 'purposive' and not necessarily a literal construction. If the issue was whether a feature embodied in an alleged infringement which fell outside the primary, literal or contextual meaning of a descriptive word or phrase in the claim ('a variant') was nevertheless within its language as properly interpreted, the court should ask itself the following three questions:

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(a) Does the variant have a material effect on the way the invention works? If yes, there is no infringement. If no;

(b) Would the immaterial variant have been obvious at the date of publication of the patent to a reader skilled in the art? If no, there is no infringement. If yes;

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(c) Would the reader skilled in the art nevertheless have understood from the language of the claim that the patentee intended that strict compliance with the primary meaning was an essential requirement of the invention? If yes, there is no infringement. If no, infringement will be established.

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[24] In our judgment, the learned Judicial Commissioner merely focused at the way in which the entire circuitry functioned, rather than focusing her mind on the variant, namely, the Transistor Q9.

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Instead of examining the evidence of the respondent's witnesses critically to determine whether the absence of Transistor Q9 has a material effect on the way the respondent's invention worked, the learned Judicial Commissioner merely made a simplistic finding that the entire circuitry in the appellant's product worked in the same way as the circuitry in Patent 058; and, thereafter, to immediately conclude erroneously that the absence of Transistor Q9 has had no effect on the way the respondent's invention worked. Instead of answering in the affirmative to the first Improver question, the learned Judicial Commissioner answered in the negative; and, with respect, herein is the error.

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[25] The learned Judicial Commissioner, with respect, failed to consider the analysis in an expert report tendered by the respondent called 'results of review conducted on plaintiff's product and defendant's product' prepared jointly by two experts, namely, Hee Joo Park and Hyon Joon Jun, of Bae, Kim & Lee IP Group, a firm of patent attorneys, which anticipated that the absence of Transistor Q9 would cause the invention to work in

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the reverse order. She also failed to consider their comments that the effects of the absence of Transistor Q9 must have been overcome by other elements, such as a "reverse-logic code" in the controller (I.C.1). Thus, this has resulted in her erroneous finding of a negative answer to the first Improver question.

[26] Further, the learned Judicial Commissioner, with respect, had failed to properly evaluate PW3's (Kyu-Bong Doh, Professor of electrical engineering at Korea Aerospace University) expert evidence when she said in her grounds of judgment:

> 86. However, this variant cannot be said to have a substantial effect on the way the circuit works. This is clear from PW3's analysis and experiments carried out on the Plaintiff's circuit and the Defendant's circuit where he was able to conclude that the circuit, with or without transistor, would function in the same way.

[27] The evidence of PW3 (see Q&A 15 to Q&A 18) shows that if Transistor Q9 were to be removed from the circuit, the respondent's machine works in the reverse order in that the buzzer will be triggered (alarm activated) when there is water in the apparatus; whereas the buzzer is designed to be triggered (alarm activated) only when there is no water in the apparatus. This only goes to show that PW3 himself impliedly conceded that the presence or absence of Transistor Q9 is a material variant for the purpose of the respondent's invention. Therefore, going by PW3's evidence itself, the answer to the first *Improver* question should have been in the affirmative.

[28] In its endeavour to establish that there is an infringement of the respondent's patent, the respondent sought to rely on the case of *Marconi v. British Radio Telegraph and Telephone* [1911] 28 RPC 181 for the proposition that if an accused apparatus is substantially the same as the apparatus said to have been infringed, then infringement is established. In this case cited, Parker J said (at p. 217):

> It is well-known rule of Patent law that no one who borrows the substance of a patented invention can escape the consequences of infringement by making immaterial variations. From this point of view the question is whether the infringing apparatus is

A substantially the same as the apparatus said to have been infringed ... where the Patent is for a combination of parts or a process, besides being itself new, produces new and useful results; everyone who produces the same results by using the essential parts of the combination or process is an infringer, even though he has, in fact, altered the combination or process by omitting some unessential part or step and substituting another part or step, which is, in fact, equivalent to the part or step he has omitted.

[29] In *Marconi*, in determining whether the accused apparatus was substantially the same as the apparatus alleged to have been infringed, the court had made a finding that the use of a two-coil transformer was not an essential feature of Marconi's invention. The court went further to find that the function of the two-coil transformer was performed by the auto-transformer in the accused apparatus. The court then found that the use of the auto-transformer 'in no way affects the results.'

[30] Placing reliance on *Marconi*, the respondent adduced evidence that (a) the circuit in the appellant's product is allegedly identical to the circuit claimed in Patent 058; and (b) the circuit in the appellant's product allegedly functioned in substantially the same way as the circuit in the respondent's invention.

[31] In our judgment, *Marconi* was decided generally upon the "pith and marrow" approach to claim construction, and was specifically dealing with the issue of infringement by mechanical equivalents. The case was decided in 1911. *Marconi* pre-dated the "purposive construction" approach taken in *Catnic* in 1982. Post *Catnic*, all earlier approaches to claim construction for the purposes of ascertaining infringement, such as "textual infringement" (or "literal infringement") and "pith and marrow" (or "substantive infringement"), have been passed over in favour of "purposive construction". Hence, *Marconi* has no relevance to this appeal.

[32] In any case, *Marconi* can be distinguished on the facts. In that case there was evidence that the two-coil transformer and the auto-transformer could be substituted for each other perfectly (presumably without making further adjustments to the rest of the component parts or circuitry). However, this is clearly not the

case before us. The respondent's evidence shows that the absence of Transistor Q9 in the respondent's circuitry would cause the invention to work in a reverse order, and in order to achieve the desired result (that is to say, the manner in which the machine is intended to operate) other elements would need to be introduced or changed. In particular, mention was made by the respondent's own evidence to changing the I.C1 (ie, the controller) to one having a 'reverse-logic code'.

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